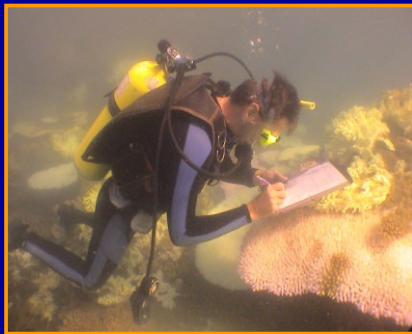




Lessons from the Great Barrier Reef Marine Park

C-SCOPE Marine Spatial Planning Conference
Portland, October 2009



Mick Bishop

*Director, Field Management
Great Barrier Reef Marine Park Authority*



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A Big Marine Park

344,400 square kilometres

- France 547,026
- Baltic Sea 386,000
- Germany 365,755
- United Kingdom 244,000
- Belgium 30,513

2900 Reefs
600 Islands
300 coral cays





A complex marine park



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Multi-jurisdictional

- Federal Marine Park with some islands, State Coastal Marine Park and Island National Parks

Pressures and Values.....

• Tourism

2 million visitor days (per year)

• Recreation

55,000+ resident recreational fishers

• Commercial fishing

900+ fishing vessels

• Shipping

2000 ship visits (per year)

7000 voyages (per year)

• Water Quality threats

• Native title rights

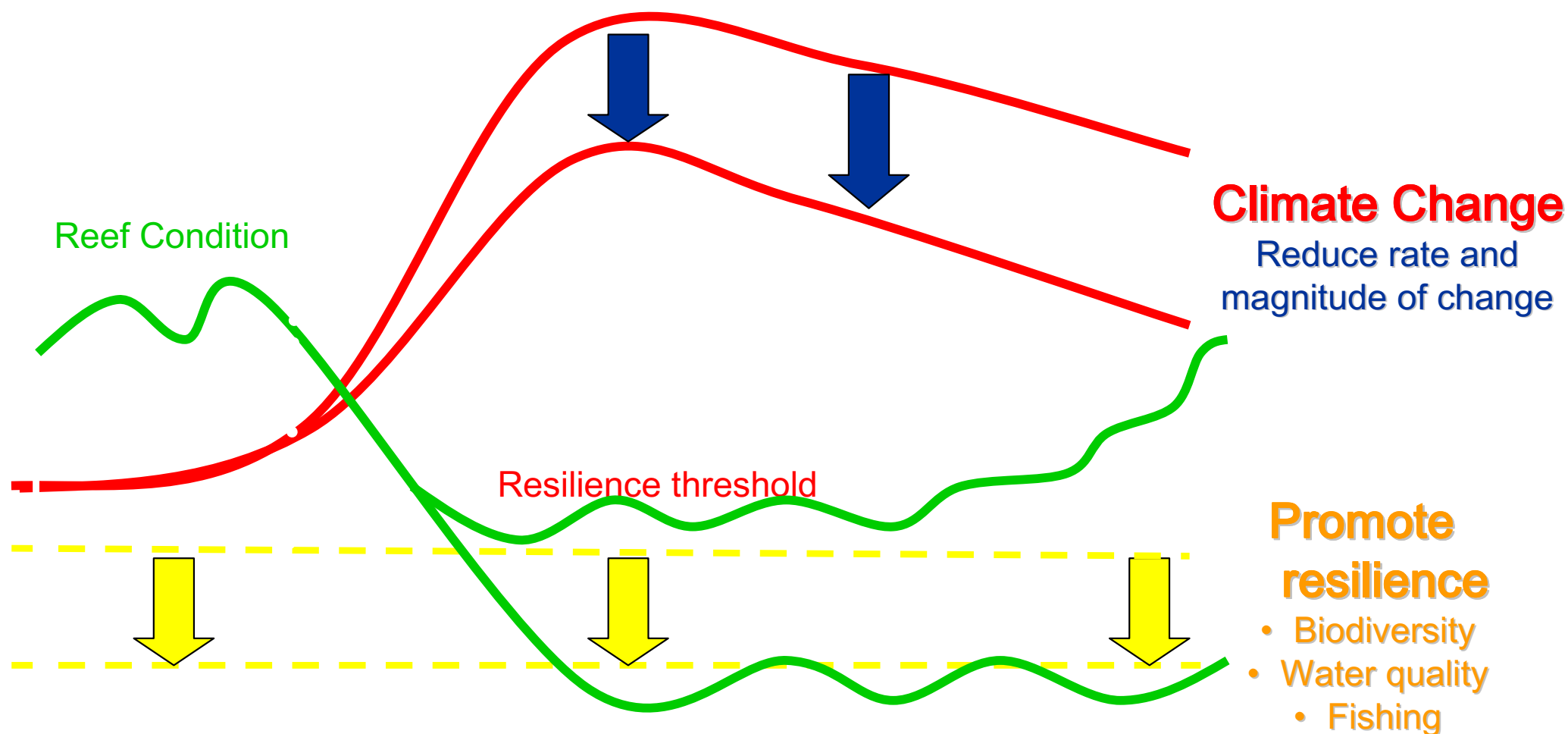


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The Future of the Reef

– Response to Climate Change Threat



What is at Stake?



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- **One of the world's Greatest Natural Wonders**
- **\$5.4 billion per year contribution to the Australian Economy (\$5.1 billion from tourism)**
- **Directly employs 53,800 FTE**



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Requirements for effective marine conservation

- **Effective marine conservation requires a lot more than just MPAs**
- **Essential requirements for effective marine conservation include:**
 - 1. regulation of land-based and maritime sources of pollution;**
 - 2. direct regulation of marine resource use;**
 - 3. establishment/management of MPAs; *and***
 - 4. integrated coastal zone/ocean management.**



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Differing perspectives

- Managers, researchers, local communities and politicians all have very different perspectives/ timeframes
- Different priorities /different agendas/expectations

Some challenges for managers

- need to clearly articulate management issues & objectives
- work with stakeholders *eg become more involved with locals/researchers in evaluations/monitoring*



Ocean Zoning

= spectrum enables multiple use



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ACTIVITIES GUIDE (see Zoning Plan for details)

	General Use Zone	Habitat Protection Zone	Conservation Park Zone	Buffer Zone	Scientific Research Zone	Marine National Park Zone	Preservation Zone
Aquaculture	Permit	Permit	Permit ¹	×	×	×	×
Bait netting	✓	✓	✓	×	×	×	×
Boating, Diving, photography	✓	✓	✓	✓	✓ ²	✓	×
Crabbing	✓	✓	✓ ³	×	×	×	×
Harvest fishing for aquarium fish, coral and beachworm	Permit	Permit	Permit ¹	×	×	×	×
Harvest fishing for sea cucumber, trochus, tropical rock lobster	Permit	Permit	×	×	×	×	×
Limited collecting	✓ ⁴	✓ ⁴	✓ ⁴	×	×	×	×
Limited impact research	✓	✓	✓	✓ ⁵	✓	✓ ⁵	Permit
Limited spearfishing (snorkel only)	✓	✓	✓ ¹	×	×	×	×
Line fishing	✓ ⁶	✓ ⁶	✓ ⁷	×	×	×	×
Netting (other than bait netting)	✓	✓	×	×	×	×	×
Research (other than limited impact)	Permit	Permit	Permit	Permit	Permit	Permit	Permit
Shipping (other than in a designated shipping area)	✓	Permit	Permit	Permit	Permit	Permit	×
Tourism program	Permit	Permit	Permit	Permit	Permit	Permit	×
Traditional use of marine resources	✓ ⁸	✓ ⁸	✓ ⁸	✓ ⁸	✓ ⁸	✓ ⁸	×
Trawling	✓	×	×	×	×	×	×
Trolling	✓ ⁶	✓ ⁶	✓ ⁶	✓ ^{6,9}	×	×	×



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The GBR is diverse & complex

- Much more than just coral reefs (~ 6%) – *it includes seagrass beds, mangroves, algal beds, soft sediments, deep water areas, coral cays, islands, etc*
- Coral reefs are important ...but equally so are all other GBR habitats; need to **protect all habitats** on which all species depend
- High level of ‘inter-connectivity’ between marine habitats



Marine Park zoning in GBR up to 30 June 1994



Permit	Permit	Permit ¹	×	×	×	×
✓	✓	✓	×	×	×	×
✓	✓	✓	✓	✓ ²	✓	×
✓	✓	✓ ³	×	×	×	×
Permit	Permit	Permit ¹	×	×	×	×
Permit	Permit	×	×	×	×	×
✓ ⁴	✓ ⁴	✓ ⁴	×	×	×	×
✓	✓	✓ ¹	×	×	×	×
✓ ⁵	✓ ⁵	✓ ⁶	×	×	×	×
✓	✓	×	×	×	×	×
Permit	Permit	Permit	Permit	Permit	Permit	Permit
✓	Permit	Permit	Permit	Permit	Permit	×
Permit	Permit	Permit	Permit	Permit	Permit	×
✓ ⁷	✓ ⁷	✓ ⁷	✓ ⁷	✓ ⁷	✓ ⁷	×
✓	×	×	×	×	×	×
✓ ⁵	✓ ⁵	✓ ⁵	✓ ^{5,8}	×	×	×



Revised ZP *Old ZP*

Preservation Zone **0.2%** (0.1%)

Marine Nat'l Park **33.3%** (4.6%)

Scient. Research **0.05%** (0.01%)

Buffer Zone **2.9%** (0.1%)

Conservat'n Park **1.5%** (0.6%)

Habitat Protect'n **28.2%** (15.2%)

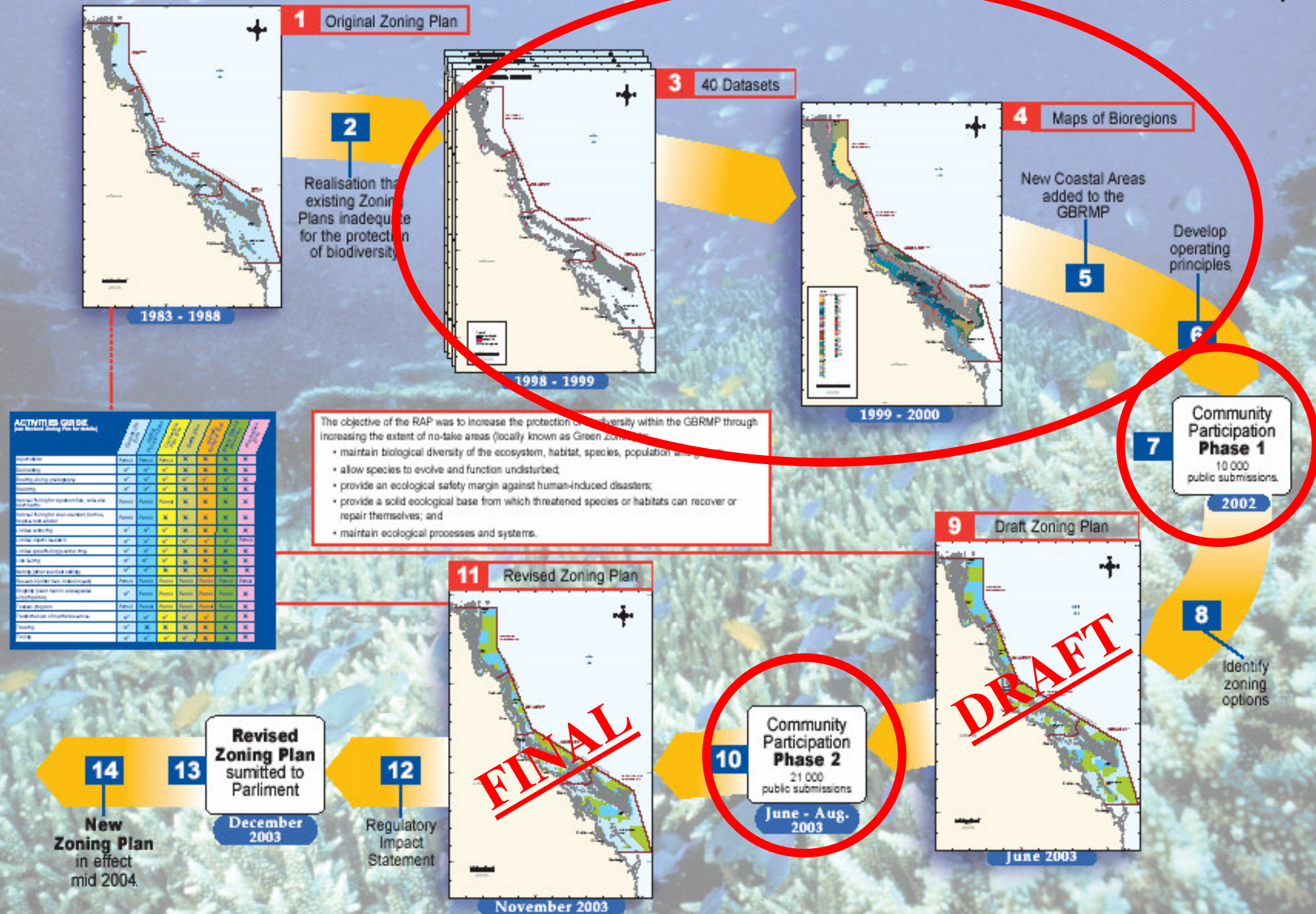
General Use **33.8%** (77.9%)

**Revised
Zoning
Plan**

1 July 2004

Permit	Permit	Permit ¹	×	×	×	×
✓	✓	✓	×	×	×	×
✓	✓	✓	✓	×	×	×
✓	✓	✓ ³	×	×	×	×
Permit	Permit	Permit ¹	×	×	×	×
Permit	Permit	×	×	×	×	×
✓ ⁴	✓ ⁴	✓ ⁴	×	×	×	×
✓	✓	✓ ¹	×	×	×	×
✓ ⁵	✓ ⁵	✓ ⁶	×	×	×	×
✓	✓	×	×	×	×	×
Permit	Permit	Permit	Permit	Permit	Permit	Permit
✓	Permit	Permit	Permit	Permit	Permit	×
Permit	Permit	Permit	Permit	Permit	Permit	×
✓ ⁷	✓ ⁷	✓ ⁷	✓ ⁷	✓ ⁷	✓ ⁷	×
×	×	×	×	×	×	×
✓ ⁵	✓ ⁵	✓ ⁵	✓ ^{5.8}	×	×	×

an ecosystem approach to protecting biodiversity



Used the best available scientific knowledge



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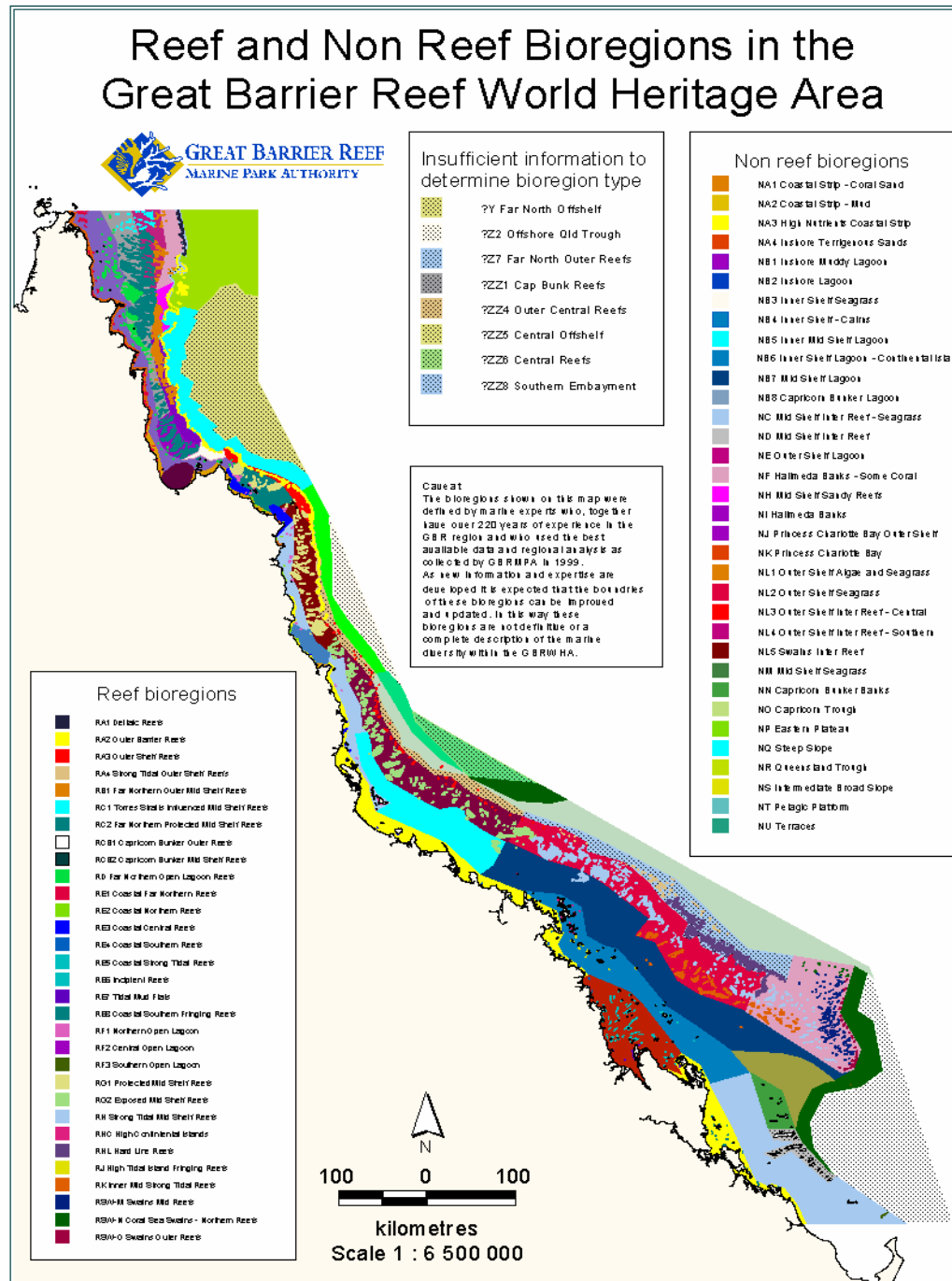
For the rezoning, independent scientific experts:

- Evaluated all available scientific information about the Great Barrier Reef
- Applied ~ 40 biological & biophysical datasets to map 70 different habitat types (= '*bioregions*')
- Recommended planning principles e.g. minimum levels of protection necessary to protect the GBR



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Experts
identified
bioregions:

- 30 Reef
- 40 Non-Reef

Total - 70
bioregions

Planning 'principles' for new 'no-take' network



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Biophysical Operating Principles

1. Minimum size 20km across if possible
2. The larger, the better
3. Replicate no-take areas within bioregions to reduce risk
4. Don't 'split-zone' reefs if possible
- 5 & 6. Minimum of at least 20% per bioregion (5 = reef; 6= non-reef)
7. Consider cross-shelf & latitudinal diversity
8. Include examples of all community types & physical environments
9. Consider connectivity
10. Consider special & unique sites/locations
11. Consider adjacent uses

Social, Economic, Cultural & Management Operating Principles

1. Maximise complementarity with adjacent areas
2. Recognise social benefits / costs (minimise impact on existing use)
3. Complement existing & future management
4. Maximise public understanding & enforceability



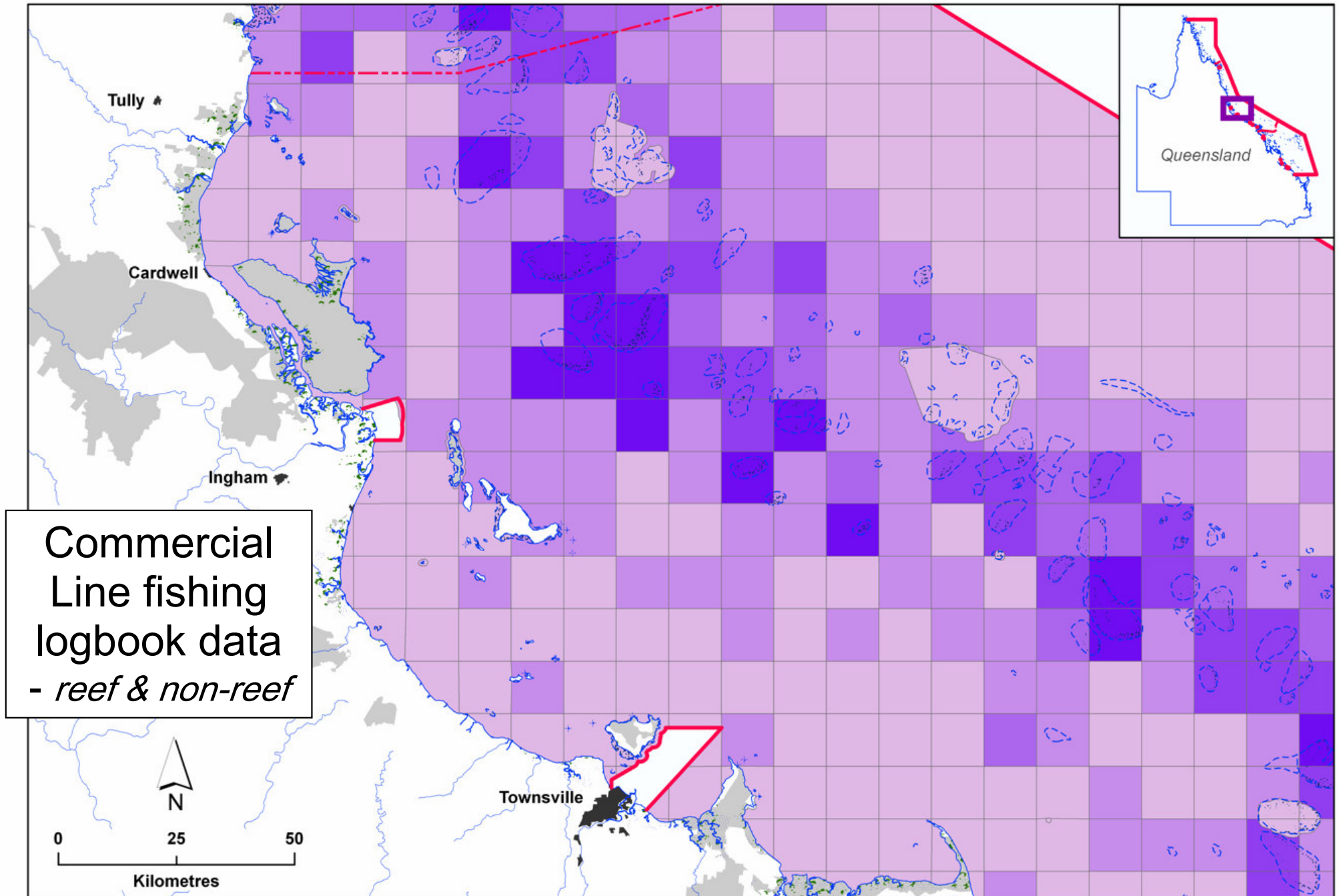
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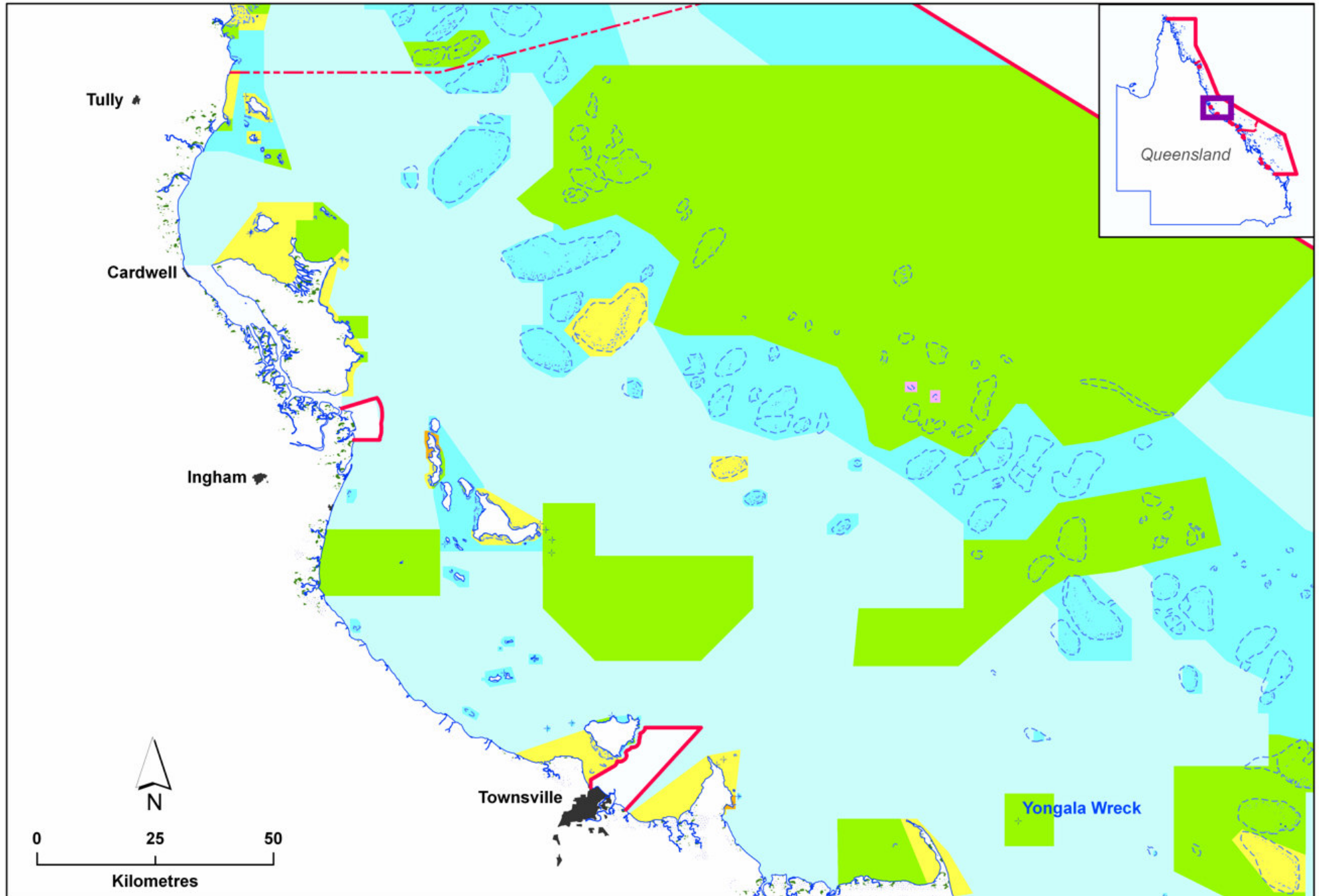
Role of public participation

- One of the most comprehensive processes of community involvement & participatory planning for any environmental issue in Australia's history
- Ongoing informal public consultation throughout
- ~ 1,000 formal & informal meetings
- 31,500 written public submissions in two formal phases

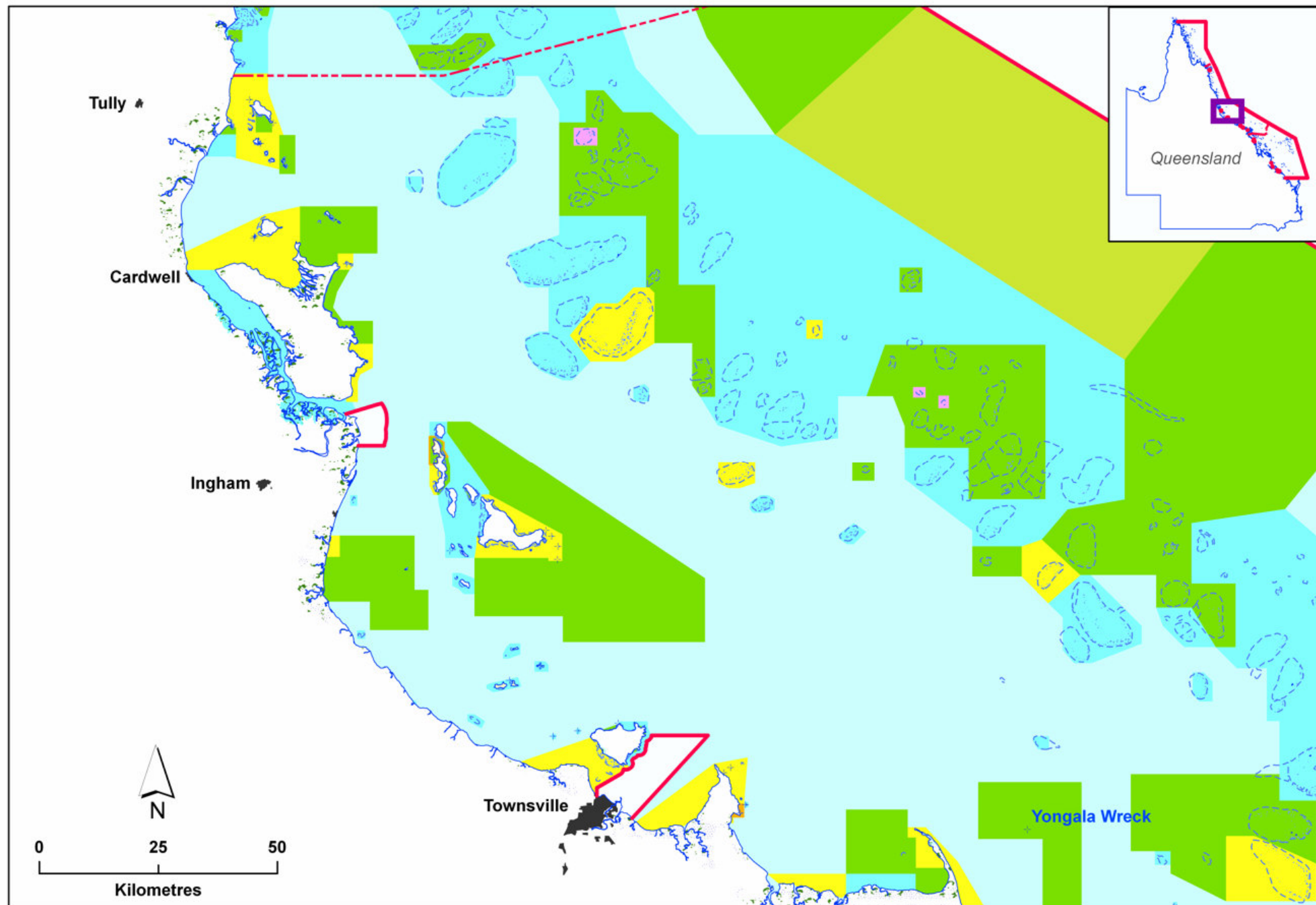
Social-economic datasets *eg. commercial fishing – grid data*



Draft Zoning Plan – mid 2003

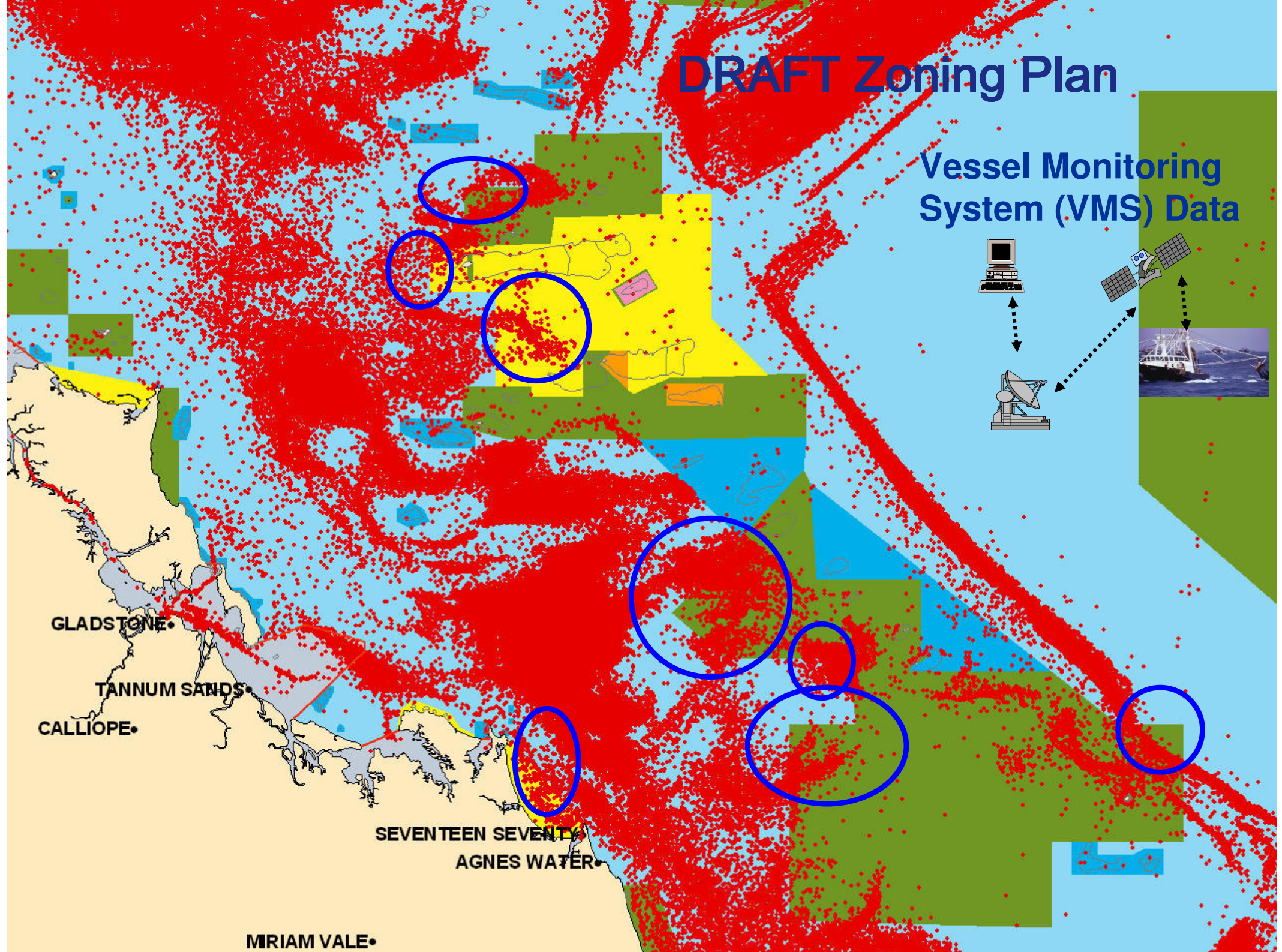
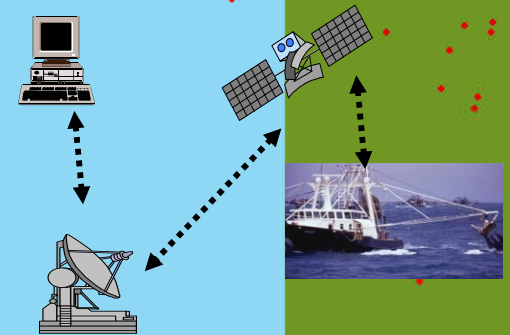


Revised & final Zoning Plan 2004



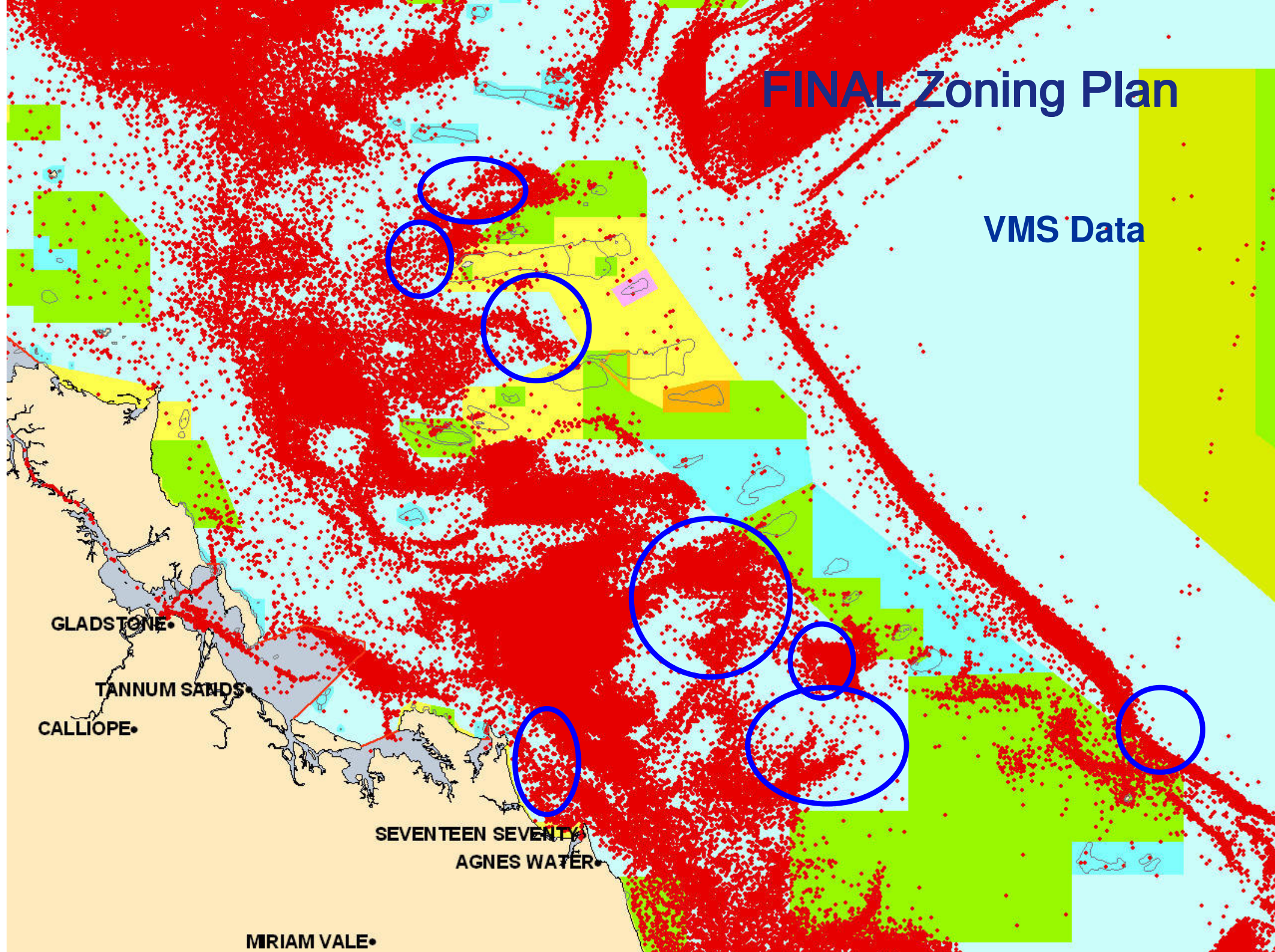
DRAFT Zoning Plan

Vessel Monitoring System (VMS) Data



FINAL Zoning Plan

VMS Data



Key lessons learnt about role of science



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1. Don't wait for 'perfect science' or data ... you will never start.
2. The value of a robust regionalisation as a basis for planning (*experts alone unlikely to develop a regionalisation useful for broad-scale planning eg. get 'hung up' trying to determine perfect bioregion boundaries*).
3. A clear and transparent set of planning/operating principles assists everyone.
4. The operating principles are not targets or 'ideal' amounts... & need to be considered collectively as 'a package'

Key lessons learnt about public participation



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1. Many stakeholders were initially misinformed about the key issues/pressures
2. People need to understand there is a problem before accepting that a solution (i.e. new zoning) was necessary
3. The rezoning was not about managing fisheries, but rather about protecting all biodiversity
4. Tailor your key messages for different target audiences (*a strategic approach*)
5. Some elements of public participation were more successful than others

Key lessons learnt about political support



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1. The 'boundaries' between what is science and policy are constantly being re-negotiated ... what is 'science' today may be tomorrow's political process.
2. Get politicians & legislators involved the more they are aware of and involved in the planning process, and the greater the community 'buy-in' to the final outcome, the more supportive everyone (esp. politicians) will be.
3. It is often necessary to concede one or more particular aspects in order to achieve an overall outcome.

The main factors for the success of the rezoning?



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The successful rezoning outcome relied heavily on:

- Using best available scientific knowledge
 - High level of public participation
 - Effective leadership (*within agency & political*)
 - Consequent socio-political support.
-
- All four aspects were essential, but the importance of the latter three cannot be emphasised enough.

Other key factors for a successful outcome



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- a multi-disciplinary planning team
- good teamwork
- able to demonstrate the best available socio-economic knowledge was applied
- effective public education/awareness
- compromise; and
- hard work!

Ocean zoning is not the only management 'tool' we use...



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- ***Legislation***
- ***Permits***
- ***Education***
- ***Surveillance & enforcement***
- ***Other spatial layers***
 - ***Shipping lanes***
 - ***Defence areas***
 - ***Tourism Plans of Management***
 - ***Indigenous hunting agreements***
- ***Temporal closures (e.g. fish spawning)***
- ***Economic instruments (eg. Environment Management Charge)***
- ***Industry Codes of Practice***



Conclusions



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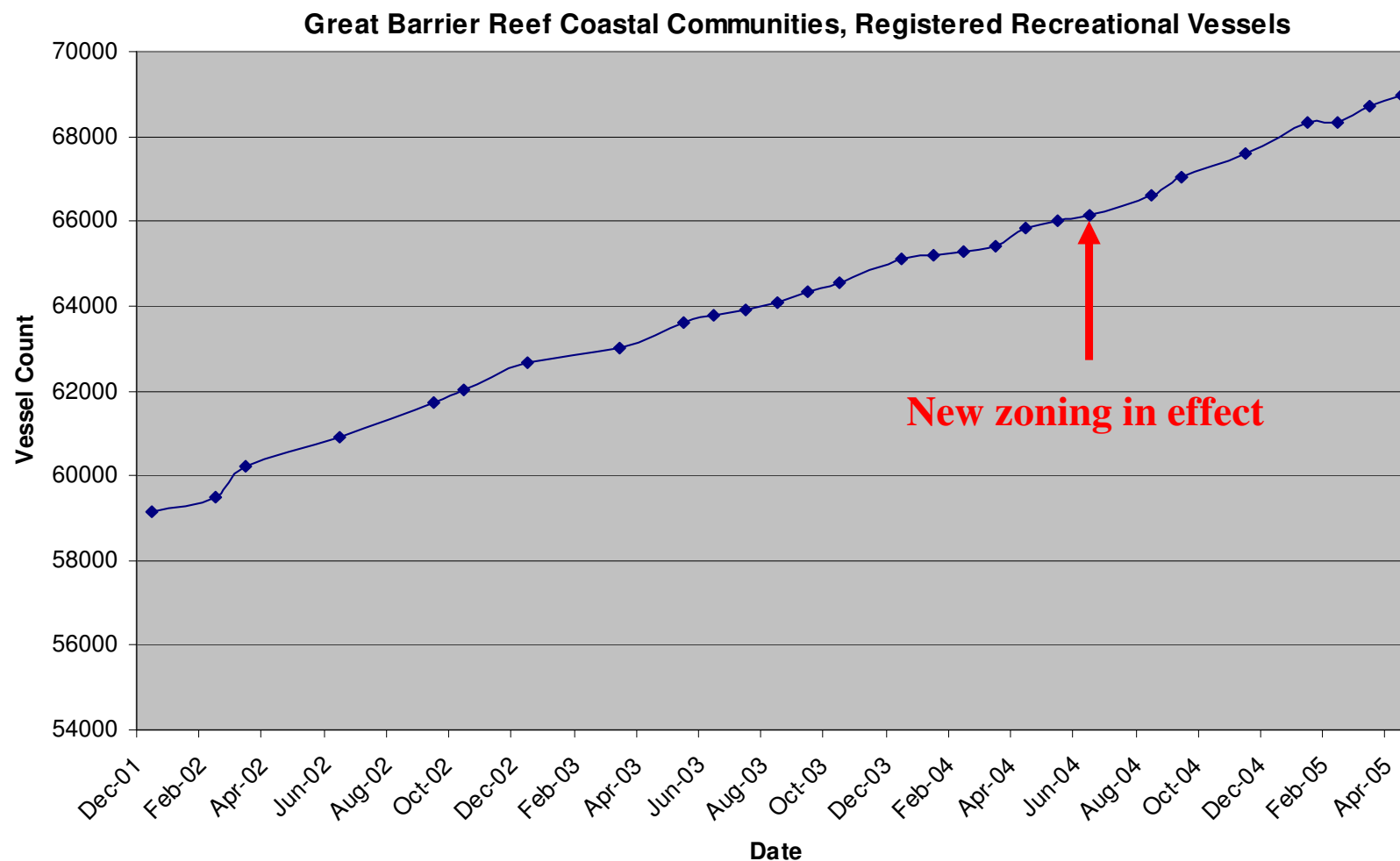
- An adaptive management approach is fundamental – (*<5% no-take for 28 years; only the re-zoning in 2004 led to >33%*)
- Zoning is not the answer for all marine conservation issues (*other mgt tools are also essential; zoning is only one of range of available management tools*)
- Complementary approach across jurisdictions is also fundamental
- Recognise the marine areas and land are linked; social, economic and environmental issues are also linked
- Need effective leadership (*both within agencies & political*)



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Monitoring – no. of rec vessels 2001-2005



Source: Queensland Department of Transport

Great Barrier Reef Coastal Communities refers to the twenty-six Local Government Areas from Bundaberg to Cape York that lie adjacent to the Great Barrier Reef Marine Park

For more information, see the website ...

<www.gbrmpa.gov.au >



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New GBR Zoning - Great Barrier Reef Marine Park Authority - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

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Conservation, Biodiversity & World Heritage | Tourism & Recreation | Water Quality & Coastal Development | Fishing

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About GBRMPA | Marine Park Management | Information Services | **New Zoning** | Permits | Media Centre

On THURSDAY 1 JULY 2004 all zoning in the Great Barrier Reef Marine Park has changed. Find out in this section how this may affect what you can do, and in some limited cases, where you can go.

NEW GBR ZONING

Latest zoning maps | Outline of new zoning | Information Sheets | 'Report on Zoning' | Statutory Zoning documents | History of the most recent zoning program | Publications about GBR zoning

The new zoning in the better protects the entire range of plants and animals. To do your bit to help protect the reef, read our [Marine Park introductory user information](#) and [environmental best practice guidelines](#) that apply to this new zoning.

Community information sessions - locations & times (format: PDF, size: 00kb)

Download GIS maps

Generate your own GIS zoning maps with all your



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Thank you



For more information:

www.gbrmpa.gov.au

Thanks to Jon Day
Director – Outlook Report Taskforce,
GBRMPA

